



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733
March 14, 2017

IAG DW9695854901-4

Ms. Maureen Smith (CEHNC-EM)
U.S. Army Corps of Engineers
E&M Center of Expertise
1616 Capitol Ave., Suite 9200
Omaha, Nebraska 68102-9200

Dear Ms. Smith:

The purpose of this letter is to issue a funding increase amendment to a Work Authorization form (WAF) issued under multi-site Interagency Agreement DW9695854901-4 to the U.S. Army Corps of Engineers (USACE), Engineer Research and Development Center. The funding is being provided in order for the USACE to provide technical support to EPA, including modeling a severe storm/hurricane and determining the impacts on the northern waste pits covered with an armored cap in accordance with Alternative 3aN as described in the Proposed Plan issued in September 2016, and impacts on the southern impoundment at the San Jacinto River Waste Pits Superfund Site. Also, complete tasks listed in the new Scope of Work in support of EPA actions at the San Jacinto River Waste Pits Superfund Site located in Harris County, Texas located in Harris County, Texas. Further, the technical assistance will include providing a discussion and response to certain comments regarding the San Jacinto River, the armored cap, and various construction issues. In addition, the technical assistance will include conducting a workshop regarding construction "best management practices" (BMPs) in Dallas, Texas, and developing a follow-up report assessing the relative merits and constructability of applicable BMPs, including recommendations of the optimum BMPs. The USACE should continue to coordinate all actions with Gary Miller, the EPA Remedial Project Manager (RPM), who can be reached in the office at (214) 665-8318.

When billing EPA, please include the site name and the site specific accounting string listed on line two (2) of the attached funding form.

<u>Site Name</u>	<u>Original Ceiling</u>	<u>Increase</u>	<u>Revised Ceiling</u>
San Jacinto River Waste Pits	\$ 398,722.00	\$ 100,000.00	\$ 498,722.00
CERCLIS No.: TXN000606611			
EPA ID: 06ZQ			

Sincerely yours,

Kellon Pearson
Project Officer
Superfund Division
Contract and Budget (6SF-VC)

Enclosure

Work Authorization Form 2014/2021 COE5490-WAF-06ZQ00-TA00-04
USACE IAG SOW for Armored Cap

**EPA/USACE SUPERFUND PROGRAM
WORK AUTHORIZATION FORM (WAF)**

☐ Original ☒ Increase ☐ Decrease ☐ Time Extension

Date: 3/14/2017

Authorization is hereby given to provide support as described in the Superfund Generic Interagency Agreement (IA) identified below. The following information is provided for cost documentation purposes:

IA Number: DW9695854901-4	
Site Name: San Jacinto River Waste Pits	Site ID: 06ZQ
Work Assignment Title (type of activity): Technical Assistance	
EPA Work Assignment Number: COE5490-WAF-06ZQ00-TA00-04	EPA Revision Number: 04
EPA CERCLIS Site ID Number: TXN000606611	Expiration Date: 01/30/2021
EPA RPM/OSC: Gary Miller (Miller.Gary@epa.gov)	Phone: 214-665-8318
Preferred USACE District (Optional): Engineer Research & Development Center (ERDC)	
USACE Program/Project Officer: Earl Hayter	Phone: 864-656-5942
Scope of Work Description: Provide technical support to EPA, including modeling a severe storm/hurricane and determining the impacts on the northern waste pits covered with an armored cap in accordance with Alternative 3aN as described in the Proposed Plan issued in September 2016, and impacts on the southern impoundment at the San Jacinto River Waste Pits Superfund Site	

Previous Funding	Current Funding	Total Funding
\$ 398,722.00	\$ 100,000.00	\$ 498,722.00

	DCN	FY	APPR	BUDGET ORG	PRC	BOC	SITE/ PROJECT	COST ORG	AMOUNT
Deobligate From:	166APLA001	16	T	6A00P	303DD2	2506	06WQTA00	C001	\$100,000.00
Obligate To:	166APLA001	16	T	6A00P	303DD2	2506	06ZQTA00	C001	\$100,000.00
Deobligate From:									
Obligate To:									



Shonda Moore, Chief
Contracts and Budget Section (6SF-VC)

14MAR2017

Date



Kellon Pearson/EPA IA Project Officer (6SF-VC)

14MAR2017

Date

Signed Originals to:

EPA Cincinnati Finance Center
Accounting Operations Office (MS 002)
26 W. Martin Luther King Drive
Cincinnati, OH 45268

U.S. Army Corps of Engineers
Environmental & Munitions Center of Expertise
1616 Capitol Avenue, Ste. 9200
Omaha, NE 68102-9200

WORK AUTHORIZATION
Statement of Work (SOW)
San Jacinto River Waste Pits
CERCLIS No.: TXN000606611 Site ID: 06ZQ
March 14, 2017

1.0 PURPOSE. The purpose of this Work Authorization issued to the Mississippi Valley Division of the United States Army Corps of Engineers (USACE) under multi-site Interagency Agreement DW-96-95854901-0 between the Environmental Protection Agency (EPA) and the USACE is to provide technical support to EPA, including modeling a severe storm/hurricane and determining the impacts on the northern waste pits covered with an armored cap in accordance with Alternative 3aN as described in the Proposed Plan issued in September 2016, and impacts on the southern impoundment at the San Jacinto River Waste Pits Superfund Site (Site). Further, the technical assistance will include providing a discussion and response to certain comments regarding the San Jacinto River, the armored cap, and various construction issues. In addition, the technical assistance will include conducting a workshop regarding construction “best management practices” (BMPs) in Dallas, Texas, and developing a follow-up report assessing the relative merits and constructability of applicable BMPs, including recommendations of the optimum BMPs.

2.0 BACKGROUND. The Site consists of several waste ponds, or impoundments, built in the mid-1960s for the disposal of paper mill wastes as well as the surrounding areas containing sediments and soils potentially contaminated by the waste materials that had been disposed of in these impoundments. The impoundments are located immediately north and south of the I-10 Bridge and on the western bank of the San Jacinto River in Harris County, Texas (see Figure 1).

Large scale groundwater extraction by others has resulted in regional subsidence of land in the vicinity of the Site resulting in exposure of the contents of the northern impoundments to surface waters. A time-critical removal action was completed in 2011 to stabilize the pulp waste material in the northern impoundments and sediments within the impoundments to prevent the further release of dioxins, furans, and other chemicals into the environment. The removal consisted of placement of a temporary armor rock cap covering 15.7 acres over a geotextile bedding layer and an impermeable geomembrane in some areas. The cap was designed to withstand a 100-year storm event, but has experienced repair events that have continued to the current time, and an adjacent riverbed scour event, since it was completed.

The southern impoundments are located south of I-10 and west of Market Street, where various marine and shipping companies have operations (see Figure 1). The area around the former southern impoundments is an upland area that is not currently in contact with surface water.

The members of the Project Delivery Team (PDT) listed in Section 2.2 below have provided technical assistance to the Site’s Remedial Project Managers (RPM) for the past four years that consisted of 1) an evaluation of modeling performed by the PRP’s modeling contractor, 2) review and comment on the draft Feasibility Study, 3) an evaluation of the design of the temporary armor cap, and 4) an assessment of the causes of a 400 square foot underwater area where the dioxin waste was exposed to the San Jacinto River.

3.0 SCOPE OF WORK. This section outlines the tasks that the PDT will perform to accomplish the requirements described in EPA's Work Authorization.

1. Lead/participate in a workshop with EPA and others regarding best management practices for application to the San Jacinto River Waste Pits site remediation.
2. Document the results of best management practices workshop in a memorandum.
3. Provide a discussion of the history of hurricanes, and the probability of occurrence of future hurricanes, and their categories, that may impact the San Jacinto site.
4. Model a severe storm/hurricane and determine the impacts on the northern San Jacinto waste pits covered with an armored cap in accordance with Alternative 3aN as described in the Proposed Plan for the San Jacinto site issued in September 2016, and impacts on the southern impoundment.
5. Evaluate and provide a discussion of the amount of cap erosion (thickness eroded, percent eroded, etc.) if any, as a result of the extreme storm modeled in Task 4.
6. Evaluate and provide a discussion of the amount of paper mill waste released (in relation to the total waste volume and TEQ present), if any, (1) as a result of the extreme storm/hurricane modeled in Task 4; and (2) as a result of the Alternative 6N removal using best management practices.
7. Provide a discussion of the uncertainty regarding the results of the model study and the evaluations.
8. Evaluate and provide a discussion of the impacts on surface water, sediment, and fish tissue under the following conditions: (1) Alternative 3aN cap without an extreme storm/hurricane; (2) Alternative 3aN cap with a future extreme storm/hurricane as modeled under Task 4; and (3) Alternative 6N removal using optimized best management practices.
9. Evaluate and provide a discussion of the load bearing capacity, and effects of exceeding the load bearing capacity if relevant, of the waste pits with the addition of larger armor stone in accordance with the Alternative 3aN cap upgrade, including the northwest cap area where geotextile is not currently present.
10. Prepare a pie-chart or other suitable visual representation showing the relative amount of waste material released under the following conditions: (1) Alternative 3aN cap without an extreme storm; (2) Alternative 3aN cap with a future extreme storm as modeled under Task 4; and (3) Alternative 6N removal using optimized best management practices.
11. Provide a discussion and response to the USACE report comments raised on pages 22 to 24, item E, in the Proposed Plan comments of International Paper Company and McGinnes Industrial Maintenance Corporation dated January 12, 2017.
12. Provide a discussion and response to the comments raised on pages 5 to 7, and the corresponding detailed discussions of these issues later in the report, in the "Review of the Proposed Remedial Action Plan" by Dr. Michael Palermo dated January 9, 2017.
13. Provide a discussion and response to the comments raised on pages 2 to 5 in "San Jacinto River Site – Review of Current Cap and Proposed Remedies" by Dr. Danny Reible dated January 11, 2017.
14. Provide a discussion and response to the comments raised on pages 1 to 4 and the corresponding detailed discussions of these issues later in the report in "Comments on the United States Environmental Protection Agency's Proposed Remedial Action Plan" by Bean Consulting dated January 11, 2017.
15. Provide a discussion and response to the comments raised on pages 6, 8, 9, and 10 in "Examination of Selected Assertions by U.S. EPA in the Proposed Plan" by Shields Engineering dated January 12, 2017, and for any additional comments as identified by EPA or the USACE.

4.0 DELIVERABLES.

1. Submit progress reports and invoices to the EPA RPM for each month no later the 15th day of the following month.
2. Lead the BMP workshop in Dallas, TX during April 2017 and submit a draft BMP report to EPA by May 15, 2017 and a final report within one month following EPA comment on the draft.
3. Submit a draft model study, and Task 3 through Task 10, report to EPA by August 15, 2017, and a final report within one month following EPA comment on the draft.
4. Submit a draft report containing responses to the Proposed Plan public comments (Task 11 through Task 15) by June 30, 2017, and an interim report within one month following EPA comment on the draft.
5. Submit a final comment responses report that is informed by the model study report within two weeks following the completion of the final model study report.
6. Provide technical support to EPA, including preparation of technical memorandums regarding the above issues during the Period of Performance.

5.0 EPA RESPONSIBILITIES. EPA is responsible for providing the necessary comments documents to ERDC. The work on Tasks 11-15 cannot begin until this is delivered.

6.0 USACE TECHNOLOGY/FOCUS AREA. ERDC-EL, Environmental Processes and Engineering.

7.0. PERIOD OF PERFORMANCE. It is anticipated that this Work Authorization will cover a time interval of approximately 18 months, or until September 30, 2018.

8.0 SECURITY. Information produced in this study is unclassified.